Claims

[c1] 1. A method of inter-frame Y/C separation, adapted for NTSC system, comprising:

sampling a composite video signal for temporarily storing a plurality of sampled data $F_{m x,y}^{P}$, wherein the $F_{m x,y}^{P}$ represents data of the y pixel at the x line of the frame m, and the m, x and y are integers larger than, or equal to, 0;

measuring a plurality of luma data Y by a F P, the FP, a F P and a F P, wherein Y represents luma data of the y pixel of the x line; and

measuring a plurality of chroma data C by the F P , the F P and the F P , wherein C , represents chroma data of the y pixel of the x line.

[c2] 2. The method of inter-frame Y/C separation of claim 1, wherein a formula for measuring the luma data is:

$$Y_{x,y} = (F_{m+1}P_{x,y} + F_{m}P_{x,y} + F_{m-1}P_{x,y} + F_{m-2}P_{x,y})/4.$$

[c3] 3. The method of inter-frame Y/C separation of claim 1, wherein the step of sampling the composite video signal is performed by 4 folds the frequency of a sub-carrier signal, and the phase of the sub-carrier signal is 0, 0.5π , π , or 1.5π .

- [c4] 4. The method of inter-frame Y/C separation of claim 3, wherein a formula for measuring the chroma data is: $C_{x,y} = \pm (F_{m}P_{x,y} + F_{m-2}P_{x,y} F_{m+1}P_{x,y} F_{m-1}P_{x,y})/4.$
- [c5] 5. The method of inter-frame Y/C separation of claim 4, wherein the chroma data C are the chroma dataof the frame m.